

Influence of Teaching-Learning Resources on Academic Performance among Public Primary Schools in Laikipia West Sub-County

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Abstract

Kenya's government implemented free primary education in 2003 as part of its attempts to attain universal primary education. Despite these attempts, worries about educational quality have grown over the years. The research looked into the influence of teaching-learning resources on pupil performance in Laikipia West Sub-County public primary schools. The study employed a descriptive survey design. The target population was 490 teachers from 49 public primary schools in Laikipia West Sub County. A sample size of 220 teachers was selected using a simple random sampling method. The researcher also sampled 10 head teachers. Semi-structured questionnaires and interview guides were used to obtain primary data. Thematic content analysis was used to examine qualitative data, while quantitative data was analyzed using descriptive and inferential statistics. The association between teaching and learning resources and pupils' academic performance was determined using correlation analysis. The findings indicated that teaching-learning resources had a positive and significant influence on pupils' performance in public primary schools. The study recommended the need for the government of Kenya through the Ministry of Education to provide sufficient teaching-learning resources to public primary schools and also to provide sufficient teachers to public primary schools to ensure improved academic performance.

Keywords: *Teaching-learning resources, Academic performance, Public primary schools*

1.0 Introduction

The Kenya government is claimed to have reaped numerous benefits from the adoption of FPE in 2003. According to (UNESCO, 2018), FPE has enabled 1.3 million children from low-income families to attend school for the first time. The emergence of FPE does not put pressure on the parents or the community to establish new schools; instead, existing facilities must be utilized to capacity (Kemendiknas, 2019). Despite the many advantages of FPE, it also poses several obstacles at the same time, including funding, working conditions, textbooks, teaching and learning methods, and the proportion of student teachers who are partially supported by public study.

Over the years, enrollment as a result of FPE increased from 5.9 million students to 7.6 million students, an increase of 29% between 2002 and 2003 (UNESCO, 2018). In 2011, 9.6 million students were enrolled, an increase of 63% over nine years (the Republic of Kenya, 2011). The increase in the number of students causes problems in administering the KCPE exam, including high teacher-student ratios, student-textbook ratios, and physical facilities. For example, between 2010 and 2013, the average national standard score on the KCPE test was 245.5 out of 500 points at the national level (Republic of Kenya, 2014). Of the 77,614 people who took the KCPE exam in 2013, only 48.28% scored 250 points, while 5,806 had more than 400 points.

The trend in dismal academic performance occasioned by FPE particularly due to increasing enrolment in primary schools contradicts the very reason envisaged by the FPE system. There are limited studies on how FPE has contributed to the academic performance of primary school pupils. It is imperative to find out the underline aspects that have contributed to this trend in academic performance. As a result, this study aimed to fill the gap by investigating the effect of teaching and learning resources on pupils' academic performance in public primary schools in Laikipia West Sub-County.

Research Hypothesis

Teaching learning resources have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County.

2.0 Literature Review

According to Chunk (2019), teaching and learning resources include, among other things, teachers and teaching supplies including classrooms, teacher manuals and powders, chalk scraps, sanitary facilities, and entertainment facilities. These resources promote effective instruction. According to Kenya's Ministry of Education, Science, and Technology (2019), FPE has enabled 1.5 million primary school kids to attend for the first time. Despite the increase in school enrollment, the Ministry of Education continues to receive insufficient funds from the government to purchase enough textbooks, teacher manuals, vacuum cleaners, and others, resulting in limited resources. According to Chunk (2019), the amount of textbooks per pupil remains high - 4:1, compared to a global standard of 2:1. The majority of purchased materials are lost within a short period, forcing pupils to disregard them. The shortage of these vital resources has compromised affecting teaching and learning activities leading to low quality of education in schools as well as poor academic performance.

Apart from the government paying for extra teachers to be deployed in various schools, particularly those perceived to be less desirable due to either poor performance or accessibility issues, the government resulted in persuading teachers to take a post in those areas. Teachers and school authorities resisted the change, resulting in more staff shortages in low-income schools since teachers were hesitant to go to regions where parents couldn't afford private tuition after school hours (Chunk, 2019). Romiszowski (2018) finds that unless governments identify and implement effective policies for teaching and assessment in schools, student performance will not improve.

According to Sifuna (2015), the teacher's role is as dynamic as the society in which he or she lives. Sifuna (2015) opined that teachers need to have a supportive environment and resources to work effectively. Kinyanjui (2017) researched the differences in the distribution of educational resources between regions of Kenya and in the separation between rural and urban areas. The study found that although national education assistance is provided equally by central organizations such as the Teacher Services Commission and the Kenya School

Equipment Scheme; Rich areas like cities can also subsidize their schools. Rural areas need to build school facilities, pay for transportation, and are more vulnerable to environmental disasters. The Consortium for Access to Education, Transition, and Justice Studies reviewed the literature on free primary education in East Africa. The monograph examines the history of education policy in Kenya, Tanzania, and Uganda and compares their efforts to implement FPE since independence.

In Kenya, the review of literature on FPE revealed that their issue in implementation and sustainability has been a major challenge in meeting the required goals in line with the international standards. Since the NARC government implemented the FPE policy in 2003, it has caused major problems in the public primary school system in Kenya and a decline in the quality of basic education. Sifuna (2015) noted that FPE was received with mixed feelings from various walks of life. While some people express feelings of discontent, failure, and betrayal, among others, many low-income people see this as a God-given opportunity. Faced with many concerns, Sifuna (2015) finds that little progress has been made in the dissemination of learning itself and the adequacy of teaching materials for school-wide teaching.

Teaching materials are instructional aids used in classroom instruction and learning. In a study by Naisiano et al. (2020), the researchers looked at how instructional materials availability affected students' growth in senior elementary schools in the Karunga region of the Gilgil District. The results of the study showed students from public schools did not achieve the achievements of their peers in private elementary schools due to a lack of resources and teachers. These materials equip students with basic knowledge and skills, as well as the ability to develop and support institutions and equip students with problem-solving skills and critical analytical thinking (Saad & Sankaran, 2020). The availability of teaching materials is very important and brings positive changes to the academic development of students. Inadequate teaching materials lead to abstract instruction and exhibit passive learning, which ultimately leads to poor performance (Wambua & Murungi, 2018).

Livumbaze and Achoka (2017), in their research analyzing the effect of teaching and learning resources on student achievement in public secondary schools in Hamisi District, Kenya, found that teaching and learning success was related to the availability of instruction and learning resources. According to the study, underperforming schools need to be provided with adequate learning and teaching resources to improve their performance. This study also identifies the importance of adequate libraries, classrooms, and laboratories to improve the performance of public schools in, Laikipia Barat District, Laikipia District. The study found that some schools had turned classrooms into laboratories exacerbating three science subjects, even in small spaces. The lack of internet connection in schools hampers the online teaching and learning process.

Tobister (2017) researched the variables affecting students' ability to succeed in school and earn a Certificate in Basic Education in the Kenyan districts of Kiminini and Transzoya. The study's findings showed that student performance in public primary schools was influenced by the availability of teaching and learning resources such as computer and science labs, libraries, classrooms, workshops, agricultural buildings and structures, farms, and playgrounds. According to the study, teachers and other staff care about the maintenance of school physical facilities because the availability of these resources and facilities in the school environment affects the teaching and learning process and student performance. Lack of adequate facilities, especially desks, classrooms, toilets, dormitories, and teacher accommodation, reduces the quality of teaching. In addition, low salaries and poor working conditions for teachers affect their ability and motivation to provide quality educational facilities, which are strategic factors

in the functioning of the organization. A good learning environment is associated with smaller class sizes, which can result in better academic performance and better access to resources. Clean air, good lighting, small, quiet, comfortable, and safe are the indicators of a good learning environment, which is important for student academic achievement. There is a better correlation between textbooks and academic performance than other learning/teaching resources identified as teaching materials.

On the same note, Musyoka (2018), in a study of academic factors influencing Kenyan students' performance at the Katiani sub-district high school diploma, found that educational resources, particularly radio, television, computers, and projectors, in public schools and teacher shortages were inadequate. This can be explained by the fact that nothing changed right away when the teacher was kicked out of the school. The investigation also uncovered insufficient lab and library facilities, among other things. Finally, this study found that principals rarely reviewed teachers' lesson notes and rarely assessed teachers. Additional research results show that learning resources, teacher adequacy, physical facilities, and the supervisory role of school principals are positively and significantly related to student achievement. Julius and Ronald (2021) also did a study on the impact of educational resources on the performance of public high school students in West Transmara sub-district, Narok County, Kenya, which showed that educational resources affected the performance of public high school students in Transmara. "District, Kenya." Financial resources through community grants, early tuition payments, scholarships, and district development funds improve school administration, influence student performance, and thereby improve student performance. Students perform better when they have access to learning resources including suitable textbooks, writing prompts, e-learning tools like radio, tape recorders, television, and video recorders, as well as teacher manuals and instructions. Similar to this, physical features like well-equipped classrooms, libraries, labs, and special areas like clinics, staff rooms, dorm rooms, kitchens, cafeterias, and restrooms improve student performance. Human resources, including adequate and well-trained teachers and non-teacher staff, enhance student performance.

The use of appropriate training facilities at all levels, including equipment and staff, improves the quality and relevance of skills taught to students, according to Otieno and Ochieng (2020), who examined the effects of the 100 percent transition policy on public secondary schools in Machakos County, Kenya. Classrooms, labs, libraries, playgrounds, and textbooks are just a few examples of teaching and learning tools. Physical assets play a significant role in fostering an environment that supports efficient teaching and learning. School implementation is related to the state of educational resources in schools. The distribution of teaching and learning resources in public schools is not balanced. Schools whose student population is dominated by students from modest backgrounds tend to underperform due to insufficient teaching and learning resources due to high student-teacher ratios. The impact of instructional materials on the academic performance of physics students in Sokoto, Nigeria, is the subject of a research study carried out by (Abubakar, 2020). The results of the study indicate that learning resources are needed to improve student achievement. The survey found that public schools have inadequate educational resources, leading to poor student performance. Training resources include textbooks, internet facilities, videos, CDs, projectors, and other electronic and print media. The availability of these educational resources needs to be increased in public schools, and free access to these resources needs to be increased.

A study conducted by Galle et al. (2020) on the impact of teaching materials on the academic performance of quantitative economics students at Northwestern State Colleges of Education, Nigeria. The survey results showed that the majority of respondents agree that they do not

always use teaching materials during their lectures. There are no teaching materials in their school. The results also show that teaching materials have a significant effect on students' academic achievement. Appropriate training resources should be used to improve school performance. This means that teaching materials improve the academic achievement of quantitative economics students.

Based on the findings of this study, Higher Education stakeholders should take appropriate steps to force all teachers to use teaching materials during the teaching and learning process and provide teaching materials to all universities in Nigeria to reduce student poverty to a minimum. Kimalel (2019) conducted a study on the impact of educational resources on children's performance in early literacy in public preschools in Kandui District, Bungoma County, Kenya, and found that educational resources are human and non-human materials. These resources are used by teachers in teaching and learning situations to enrich their teaching and achieve their goals. The training resources are divided into four main categories such as Visual Aids, Audio Aids, Audio-Visual Aids, and Specific Materials.

In selected secondary schools in Mbarara Town, Mbarara District, Uganda, Amon (2017) performed a study on learning resources and student academic achievement. After discovering the research intently, 200 respondents received a questionnaire that provided data on the role of learning resources and the skills covered. Interviews were conducted with high school students, respondents as well as principals and classroom teachers on questions related to the topic. The study found that insufficient and insufficient use of resources was therefore the reason for student disability and poor performance. According to Kimalel (2019), visual aids require the use of visual aids such as tables, photos, and flashcards. Audio-visual devices produce sound and images such as televisions and video cassettes. Hearing aids that produce sounds such as radios, tape recorders, and concrete materials that can be manipulated such as letter and word quotes, picture quotes, books, models, etc. Learning resources are used to enhance learning, stimulate curiosity and create an atmosphere that engages all of the learner's senses. Thus, learners are fully immersed in the learning activities of their structured learning environment and make a difference in the achievement of learners in different preschools. The availability of teaching materials has a strong positive relationship with the development of students' literacy skills. This indicates that the availability of educational materials allows preschool children to acquire more reading skills than writing skills.

3.0 Methodology

The study's research design is a strategy for determining the solution to the study's problem (Mugenda & Mugenda, 2008). This study used a descriptive research design, to gather relevant and reliable information regarding the current state of the phenomena and, when possible, to draw valid overall inferences from the findings. According to Kothari (2014), descriptive research is used to gather data on the current condition of a phenomenon to describe what is known about the variables. Also, in line with Cooper and Schindler (2008), descriptive survey design is used to help to determine whether there is a significant association among variables existing at some point in time. Bryman (2012) purports that descriptive survey designs are relevant in a study when the purpose is to explain variables as they are in their current state and how they affect a phenomenon. Descriptive survey designs also allowed the researcher to collect both quantitative and qualitative data (Bryman, 2012). In this study, the researcher dealt with issues that have happened or happening and as such had no control over variables in terms of being able to manipulate them, hence descriptive survey suffices. Therefore, the research design was employed to gather accurate data on the current state of FPE in public primary schools in Laikipia West Sub County.

4.0 Results and Discussion

Response rate

The researcher distributed 220 questionnaires to public primary school teachers in West Laikipia Sub-County. Out of this, 172 (78.2%) questionnaires were returned and used in the analysis. As for principals, the researcher had intended to interview 10 of them, but only six were available during the interview period. This represented a 60% response rate. A response rate above 50% was considered adequate for statistical analysis (Saunders et al., 2009).

Descriptive Analysis

The study sought to assess the influence of teaching-learning resources on academic performance among public primary schools in Laikipia West Sub-County. The respondents were asked to rate the statements on teaching Learning resources. The scale used was as follows: Strongly disagree (1), Disagree (2), Not sure (3) Agree (4), and strongly agree (5). Descriptive statistics results are captured in Table 1.

Table 1: Descriptive Statistics on teaching learning resources

Statements on Teacher Learning Resources	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
	f(%)	f(%)	f(%)	f(%)	f(%)
There are sufficient teacher guides in the school	75(43.6)	76(44.2)	6(3.5)	9(5.2)	6(3.5)
The test books are enough to be shared one between two pupils	68(39.5)	83(48.3)	6(3.5)	12(7)	3(1.7)
There are enough teaching aids to serve all classes	78(45.3)	66(38.4)	1(0.6)	16(9.3)	11(6.4)
There are enough chalks to be used in all classes	4(2.3)	20(11.6)	3(1.7)	68(39.5)	77(44.8)
Classes are not congested with pupils sharing desks	67(39)	72(41.9)	4(2.3)	15(8.7)	14(8.1)
Sometimes the school run out of chalk in the middle of lessons	72(41.9)	68(39.5)	7(4.1)	9(5.2)	16(9.3)

The findings in Table 1 show that the majority of the respondents disagreed with the statement that there were sufficient teacher guides in the school (87.8%), the test books were enough to be shared one between two pupils (87.8%), and there are enough teaching aids to serve all classes (83.7%). The respondents further disagreed with the claims that classes were not congested with pupils sharing desks (80.9%), and sometimes the schools run out of chalk in the middle of lessons (81.4%). On the other hand, most of the respondents agreed that there were enough chalks to be used in all classes (84.3%). The findings imply that most of the respondents felt that teaching-learning resources were not adequate in schools. According to Okongo et al. (2015) utilization of resources in education brings about fruitful learning outcomes since resources stimulate students learning as well as motivate them hence high levels of academic performance. These resources include material resources, physical facilities, and human resources (DFID, 2007). Studies done in the past about the availability of TLR in education reveal that TLR is not always available in schools. This inadequacy of TLR has been of serious concern to educators.

According to Lyons (2012), learning is a multifaceted activity that involves an interchange of physical facilities, students’ motivation, teaching resources, and skills of teaching and curriculum demands. Accessibility of TLR enhances the effectiveness of schools as they are the fundamental resources that bring about good and improved academic performance in the students. The necessary resources that should be available for teaching and learning include material resources, human resources such as teachers and support staff, and, physical facilities such as laboratories, libraries, and classrooms.

These findings also agreed with Musyoka (2018) observation that inadequate library and laboratory facilities characterized most schools. Further, the study findings supported a study by Abubakar (2020) that found that public schools have inadequate educational resources, leading to poor student performance. When asked whether the ministry of education was doing enough in terms of providing a resource to support free primary education, four principals indicated that the ministry of education was not doing enough to ensure sufficient resources are available in schools. They cited classrooms, textbooks, and teachers as some of the resources that were not adequately provided. On the other hand, three principals acknowledged the government’s efforts to provide resources to support free primary education. One of the participants, P1 observed that ...*“the government has made effort to construct new classrooms as well as improve the existing ones”* This supported a study by Livumbaze and Achoka (2017) who identified the importance of adequate libraries, classrooms, and laboratories to improve performance of public schools.

The principals were also asked to explain the significance of teaching-learning resources on pupils’ performance given the effect of free primary education. All the participants were in agreement that teaching-learning resources were critical in ensuring the success of free primary education through improved learners’ performance. One of the participants, P4 opined that *“...having adequate and relevant teaching-learning resources is fundamental to achieving the objective of free primary education program”* The findings agreed with a study by Kimalel (2019) who argued that learning resources are used to enhance learning, stimulate curiosity and create an atmosphere that engages all of the learner's senses.

Correlation Analysis

This section provides results on the correlation between the independent and dependent variables. The study sought to determine the relationship between teaching-learning resources, and academic performance among public primary schools in Laikipia West Sub-County. Results are shown in Table 2.

Table 2: Correlation Results

		Academic Performance	Teaching Learning resources
Academic Performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Teaching Learning resources	Pearson Correlation	.689**	1
	Sig. (2-tailed)	0.000	

Table 2 indicates that teaching-learning resources ($r = .689^{**}$, $P < .05$), had a positive and significant correlation with pupils' academic performance. This denoted that teaching-learning resources were significantly associated with pupils' academic performance. The findings agreed with a study by Julius and Ronald (2021) which found that learning resources such as appropriate textbooks, writing materials, e-learning materials, and teacher manuals improve student performance. The null hypothesis (H_0) predicted that teaching learning resources have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County. Based on the correlation results ($p < .05$), the null hypothesis was rejected suggesting that teaching learning resources have a statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County.

5.0 Conclusion

The study concluded that teaching-learning resources had a positive and significant influence on pupils' performance. This implies that teaching-learning resources contribute positively to pupils' performance in public primary schools. The key aspects regarding teaching-learning resources were teacher guides, test books, teaching aids, and classrooms.

6.0 Recommendations

The findings showed that teaching-learning materials had a favorable and significant impact on students' performance. The report recommended that appropriate teaching-learning materials be provided to public elementary schools by the Kenyan government through the ministry of education. Some of these resources should include teacher guides, test books, teaching aids, and classrooms. The results established that the pupil-teacher ratio had a negative and significant influence on pupils' performance. The study recommended the need for the government of Kenya through the ministry of education to provide sufficient teachers to public primary schools.

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